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THE ROLE OF EU FUNDS IN THE FINANCING OF INNOVATION OF POLISH ENTERPRISES

Abstract:

The analysis of the functioning of Poland within the European Union allows to conclude that the economy of our country effectively adapts to the structures of the European Union. The visible positive effects include a.o. an increase of the financial credibility and of the investment attractiveness.

The current economic growth is a result of entrepreneurship, cheap labor force, the catch-up effect resulting from the import of technologies from developed countries. The growth is mainly due to an increase in the total factor productivity. This means innovation and its ability to be implemented. Poland's shift in the innovation ranking of the EU countries up from the group of modest innovators in 2012 to moderate innovators in 2013 is not very satisfactory. The goal of this paper is to present the role of EU funds in improving innovation both within the "Innovative Economy" program 2007-2013 and the "Smart Growth" program 2014-2020.

Special attention was paid to small and medium-sized enterprises, which are the driving force of economic development, and to balancing the levels of development of Polish regions. A new strategy for the financing of small and medium-sized enterprises in both analyzed periods was also presented. Particular attention was paid to the promotion of research and its links with business, the development of innovative technologies and actions improving the competitiveness of enterprises. The paper is also focused on the evolution of financial instruments allowing the change from the business innovation model based on buying innovative solutions to the creation of the firm's own innovations.

The creation of a viable model of knowledge-based economy linking science with business is the most important task for improving innovation.

The new perspective and new aid programs 2014-2020 will provide strong support for future beneficiaries of the EU budget grants.

Smart use of EU support for innovative economy is the biggest challenge faced not only by Poland but the whole Central and Eastern Europe.

Keywords:

EU funds, SMEs, financing innovation

JEL Classification: O31, M13, D92

Introduction

One of the determinants of competitive advantage of an enterprise in the contemporary world and in the era of the globalization of the markets is its innovative activity. Innovation allows for the improvement and modernization of production processes, increase of productivity, efficiency and quality of work, increase of quality of products and their competitiveness, increase of the overall efficiency and effectiveness of operation. The improvement also relates to the organization and methods of work, the replacement of human labor as a result of better organization and higher productivity based on richer and modernized technical equipment, increase in export capabilities, etc.

The new economic model called the network economy significantly shifts the responsibility for the development of societies from large enterprises to enterprises constituting the SME sector. The SMEs represent 99.88% of the total number of enterprises in the EU market and employ approx. 70% of the workforce in this part of Europe. According to G. Verheugen "SMEs are the engine of the European economy, (..) create entrepreneurial spirit and innovation in the EU and (...) are crucial for fostering competitiveness" [Verheugen006] . Therefore, all countries in the EU should have interest in the development of the SME sector. Nevertheless, there are barriers to its development. The most important are still: excessive bureaucracy of central and local administration, complicated and inefficient tax system and poor access to financing.

Elimination of the first two barriers of development of SMEs is the responsibility of the state and improving SMEs' access to financing is usually left to the laws of the free market. The analyzed sector is seen as the most important element in the process of stimulating both Polish and European economy. In order to fulfill its role, SMEs should be given the most favorable conditions for their development. From the point of view of smooth functioning of the SME sector in the markets it is especially important to prevent the creation of the financing gap in course of their operation and to support the improvement of their innovativeness which is conducive to improvement of competitiveness. The adequate development of enterprises is possible thanks to financial investments.

State aid in Poland from national and EU resources is one of the elements of economic policy, which can significantly help the development of innovativeness of SMEs. It is necessary to allocate more funds for R&D by the state and the enterprises themselves.

A characteristic feature of the modern world economy is growth of innovativeness and advanced technologies as primary determinants of economic processes. The level of innovation of firms determines the pace of economic development. Poland has been located in the tail of any innovation rankings for many years. According to the Innovation Union Scoreboard 2014 only such EU members as Latvia, Lithuania,

Bulgaria and Romania were ranked worse than Poland in this regard (Innovation Union Scoreboard 2015).

The subject of this research is the support of the European Union in the form of structural funds, which affects the development of innovativeness of SMEs and improves their competitiveness in domestic and foreign market.

EU funds within the Innovative Economy Operational Program

The main objective of the IE OP was the development of Polish economy based on innovative enterprises through the implementation of the specific objectives:

- a. increasing innovativeness of enterprises,
- b. increasing competitiveness of Polish science,
- c. increasing the role of science in economic development,
- d. increasing the share of innovative products of Polish economy in the international market,
- e. creating stable and better jobs,
- f. increased use of information and communication technologies in the economy.

In the period 2007-2013 the state aid was granted to SMEs by the European Union a. o. within the Innovative Economy Operational Program. The adopted strategy of the IE OP assumed comprehensive support for innovative entrepreneurs in conducting R & D, in their investments, as well as consultancy and training necessary for realization of these investments. These were actions that contributed to strengthening competitive position of SMEs in the Single European Market and international markets, and consequently to generating stable and better jobs in innovative enterprises (Szczegółowy opis priorytetów Programu operacyjnego Innowacyjna gospodarka 2007-2013, 2012).

The architecture of the budget for the analyzed period is shown in Table 1.

Table 1. Budget structure for the Innovative Economy Operational Program addressed to enterprises 2007-2013 (%)

Measures	Total (%)	EU support (%)	Domestic support (%)
1.3. Support for R&D projects for entrepreneurs carried out by scientific entities	5,50	5,92	3,93
1.4. Support for goal-oriented projects	8,14	8,76	5,82
3.1. Initiating of innovative activity	2,47	2,66	1,76
3.2. Support for funds of high risk capital	9,32	2,43	35,28
3.3. Creating system facilitating investing in SMEs	0,50	0,54	0,36
4.1. Support for implementation of results of R&D works	5,05	5,43	3,61
4.2. Stimulation of R&D activity of enterprises and support in the scope of industrial design	2,97	3,19	2,12
4.3. Technological credit	5,79	6,23	4,13
4.4. New investments of high innovative potential	22,79	24,49	16,29
4.5. Support for investments of high importance to the economy	13,39	14,40	9,58
5.1. Support for development of supra-regional cooperative relations	1,47	1,58	1,05
5.2. Supporting business environment institutions providing proinnovative services and its networks of supra-regional importance	0,93	1,00	0,66
5.3. Support for innovation centres	3,53	3,79	2,52
5.4. Intellectual property management	0,49	0,56	0,25
6.1. Passport to export	1,72	1,85	1,23

6.4. Investments in tourism products of supra-regional importance	1,95	2,10	1,40
8.1. Support for economic activity as regards electronic economy	5,51	5,94	3,94
8.2. Support for implementation of electronic business – B2B	5,66	6,09	4,05
8.4. Ensuring Internet access at the 'last mile' level	2,82	3,04	2,02
Total	100,00	100,00	100,00

Source: Own elaboration based on: *Szczegółowy opis priorytetów Programu operacyjnego Innowacyjna Gospodarka 2007-2013*, Ministry for Regional Development, Warszawa 2012.

In total, EUR10186,03 million of domestic and EU funds were earmarked for implementation of the entire program, with approx. 70% of this amount destined for the development of all enterprises. The highest EU funding went to Measure 4.4 (EUR1370.5 million) and Measure 4.5. (EUR805.8 million) - 24.5% and 14.4% respectively. These are projects of special importance for the development of enterprises, and in line with the objective of the program. The lowest amount of EU and domestic funds was earmarked for Measure 3.3 and Measure 5.4. EU support was higher than domestic support in case of 18 measures, only in case of Measure 3.2 it was the opposite. The total share of SMEs in the contracts concluded within this program was 95.6% with the largest share of microenterprises - 48.9%. But the total value of these contracts was three times lower than that of large companies. Thus, the share of large companies was 4.4%. A detailed research shows that there are considerable differences in the scale of use of resources in different regions of the country.

Some data on the achieved effects provides a comparison of the obtained ratios with the expected values (Hryniewiecka, 2015). The highest ratio is related to the number of supported projects within the Measure 8.2 - that is supporting implementation of electronic business, which means that this form of activation of firm's activities is appreciated by entrepreneurs as it reduces the firm's costs and increases development of e-business. There was no implementation of Measure 3.2 and in consequence no support of venture capital funds for SMEs. The weak point of this form of financing in Poland is lack of new scientific developments which are commercially mature enough to attract investors. A similar situation concerns Measure 5.3 - support of innovation centers. It was intended to create centers located in areas with high growth potential.

A significant role in increasing innovativeness of the economy is played by an institutional infrastructure supporting innovation activities of enterprises. Although the interest of entrepreneurs at the stage of preparing the export plan was big, its implementation poor and amounted to only 2% of the value specified in the program and also too small number of entrepreneurs increased their share in exports. On the other hand, implementation rate of Measure 4.2, related to stimulating R&D activity of enterprises and support in the area of industrial design, amounted to 52 - 77% of the assumed value (Hryniewiecka, 2015).

In the analyzed period there were no tax instruments supporting innovativeness. There was a tax relief for the acquisition of new technology, but still it was not the incentive for the inventiveness but rather promotion of the purchase of the final results of R&D activities, mostly from abroad.

A new perspective of financial support within the Smart Growth Operational Program 2014-2020

Although the share of expenditures on research and development in Polish GDP is growing, we are still far behind the European Union. Expenditures on research and development activities in Poland reached 0.87% of GDP in 2013, compared to 0.56% of GDP in 2004. But they remained clearly below the EU average, which last year amounted to 2.02% of GDP (compared to 1.76% in 2004), according to data from Eurostat.

The highest level of expenditures on research and development in relation to GDP among EU countries was recorded last year in Finland - 3.32% and Sweden - 3.21%. The lowest level was observed in Romania - 0.60% and Cyprus - 0.48%¹ (Puls Biznesu. 2014) It should be recalled that the share of enterprises in financing research and development in Poland is relatively small.

The range of support within the new Smart Growth Operational Program (SG OP) resulted from experience with the implementation of the Innovative Economy Program. The conducted analyses showed that there was too large thematic diversification of the areas of support and the role played by non-repayable subsidy instruments was too dominant. Development model based on cheap labor and imports of new technologies slowly expires. Productive capital in Poland is used solely to reproduce the production of cheap goods. We need to move from the stage of reproduction to the stage of creating more value added. Polish economy loses the ability to increase exports by accepting foreign technologies. We should to a greater extent create our own innovations. There were also no tools allowing to evaluate and measure the innovativeness of projects.

¹ <http://www.forbes.pl/naklady-na-badania-i-rozwoj-wydajemy-coraz-wiecej-ale-malo,artykuly,193956,1,1.html>, access 17.11.2015

The Smart Growth Operational Program (SG OP) assumes a new approach - support from the idea to the market. It means financial support throughout the innovation development process - that is from the phase of creating the idea through realization - preparation of prototype, to commercialization. There will also be a change in the form of financing the implementation of new technologies. The grant system will be supplemented by non-repayable and mixed instruments. One of the key objectives of the new program will be focusing support on the areas having the highest growth potential, in accordance with the idea of smart specialization (Gwizdy, Kosewska - Kwaśny, Żółciński, 2014).

The growth of innovativeness of Polish economy will be achieved primarily by increasing business expenditures on R&D. Activities within the program are focused mainly on strengthening links between business and science, thereby increasing the degree of commercialization of R&D results, their practical use in the economy, as well as support for innovativeness of firms.

Within the program 5 priority axes are implemented and EU support amounts to EUR8,614.1 million. Allocation of funds by measures is shown in Table 2.

Table 2. Budget structure for the Smart Growth Program 2014-2020 (%)

Measures (priority axis)	Total	EU support (%)	Domestic support (%)
I. Support for R&D activity of enterprises and scientific-industrial consortia	40,06	40,05	40,14
II. Support for innovation in enterprises	28,13	28,13	28,12
III. Supporting the environment and potential of innovative enterprises	12,42	12,43	12,38
IV. Increasing the potential of research institutions	15,94	15,94	15,92
V. Technical assistance	3,45	3,45	3,43
Total	100,00%	100,00%	100,00%

Source: *Wsparcie dla przedsiębiorców w ramach Programu Operacyjnego Inteligentny Rozwój 2014-2020. Ministry of Infrastructure and Development, Warszawa 16.05.2014.*

I. Support for R&D carried out by enterprises.

In this area research and development projects of enterprises are financed, including projects involving experimental prototypes and pilot installations. A funding scheme for R&D projects was provided and implemented in cooperation with venture capital funds. The instrument will stimulate the creation of firms, based on the results of R&D results obtained mainly in research units.

II. Support for the environment and the potential of enterprises to conduct R&D&I.

In the framework of Axis II of the program, projects such as the creation or development of R&D infrastructure in enterprises are co-financed. Activities will be implemented that support proinnovative services for enterprises, provided by business environment institutions or research units, including services related to R&D, technology transfer, protection of intellectual property and cooperation in the area of R&D&I.

Support offered under the Axis III of SG OP will be available exclusively for the SME sector. The financing includes projects aimed at implementation of innovative products, services or technologies.

The emphasis will be placed on the selection of projects that relate to the application of the results of R&D in economic activity due to the variable level of risk of the implementation projects. It is anticipated that a variety of instruments will be applied, that provide support both in the form of grants and financial instruments (e.g. credit guarantees, loans).

This type of actions will be realized with the use of capital instruments (with the involvement of seed capital funds, venture capital funds or business angels) and lending instruments (supplementary capital support), and - to a limited extent - grants financing the costs of consultancy services related to the acquisition of capital from regulated and alternative markets.

This program also finances consulting services connected with internationalization of firms and programs promoting Polish product brands. The aim of these activities is to provide comprehensive services to SMEs in the process of internationalization, starting from providing basic information on specific markets, through supporting the initiation and development of cooperation with foreign partners, to assistance in the foreign market.

In case of the use of guarantees, acceptance and evaluation of applications can be carried out in cooperation with financial institutions which have the necessary capacity and experience in offering this type of instruments. In Poland, this offer is under the competence of Bank Gospodarstwa Krajowego.

It is also planned to support innovative start-ups, i.e. young firms conducting R&D, engaged in the commercialization of the results of such work or implementing innovative ideas in their activity.

IV. Increasing the research potential

This area serves improving the quality of Polish science. Within its framework research and development carried out by the science sector in partnership with entrepreneurs is financed. The survey conducted in 2014 shows that the number of firms that intend to spend more on research and development increased compared to 2013. 47.2% of them plan to increase their expenditures over the next two years (up from 36.6%), 61.1% of respondents in the perspective of three to five years (up from 51.2%). This trend is particularly evident in the manufacturing sector where the growth of expenditures on R&D in the short term is planned by 70% of enterprises, and in the next 3 to 5 years - by 80% of enterprises (Badania i rozwój w Polsce, 2014) (Szczegółowy opis osi priorytetowych programu operacyjnego Inteligentny Rozwój 2014-2020, 2015).

Conclusion

Innovativeness requires a proper social space and it is necessary to improve the administrative and legal system. Researchers' observations suggest that the effects of absorption of EU funds are essentially demand-related, and are short-term by nature. An important question is if the invested EU funds will cause lasting effects.

Despite the efforts to create a knowledge-based economy Poland is currently assigned to a group of Moderate Innovators. The value of expenditures on R&D in relation to Polish GDP is significantly below the EU average. According to the assumptions adopted a national strategy to 2020, this ratio should be more than doubled, mainly by mobilizing private capital financing of R&D. Hence, the instruments addressed to scientific units should contribute to creation of a knowledge-based economy.

It is necessary to concentrate support on the so-called smart specializations, which are selected fields of science and areas of the economy, which create the development potential of the country and its regions.

The support system for enterprises also requires modification. A large part of European funds in the past years of the Innovative Economy program was used to finance the purchase of modern technology, machinery, and equipment. Despite the fact that these funds contribute to improving the productivity of the economy, they did not build competitive advantages on a global scale. The chances of enterprises to compete effectively grow together with a propensity to create their own solutions, which are innovative in the country and even globally. Hence, the EU funds after 2014 will be used to support firms in the implementation of R&D projects, eg. in the model "from the Idea to the Industry" and to provide R&D infrastructure. Also the

internationalization of activities, eg. by exports, foreign investment and participation in international projects can give the impetus for growth of competitiveness of enterprises.

An important issue after 2014 will be the efficient use of existing resources, and in case of further support of individual projects - their strong link with the realization of research plans. It is necessary to put more emphasis on supporting projects realized in cooperation with academic and business sector.

An important challenge for the Polish economy is to maintain high growth, which requires more innovation and development of new technologies. The measures adopted so far have not led to a visible improvement of innovativeness of Polish enterprises. Still persistent low expenditures on research and development, and in particular the severe under-investment in research and innovation in the private sector as well as limited cooperation between research sector and industry require a new approach, involving well-designed incentives and effective support through public financing, including more intensive public-private cooperation.

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